

Elk Cool Shingle Program

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Cool Barkwood

Elk Cool Shingle Program **Market and Technical Status**

Working with 3M, Elk became the first shingle manufacturer in the residential Cool Roof arena with the introduction of 4 Elk Cool Colors in March 2005. Reflectance levels of .25 - .27; emittance in the .90 range.

The Solution For Nonwhite Cool Shingles

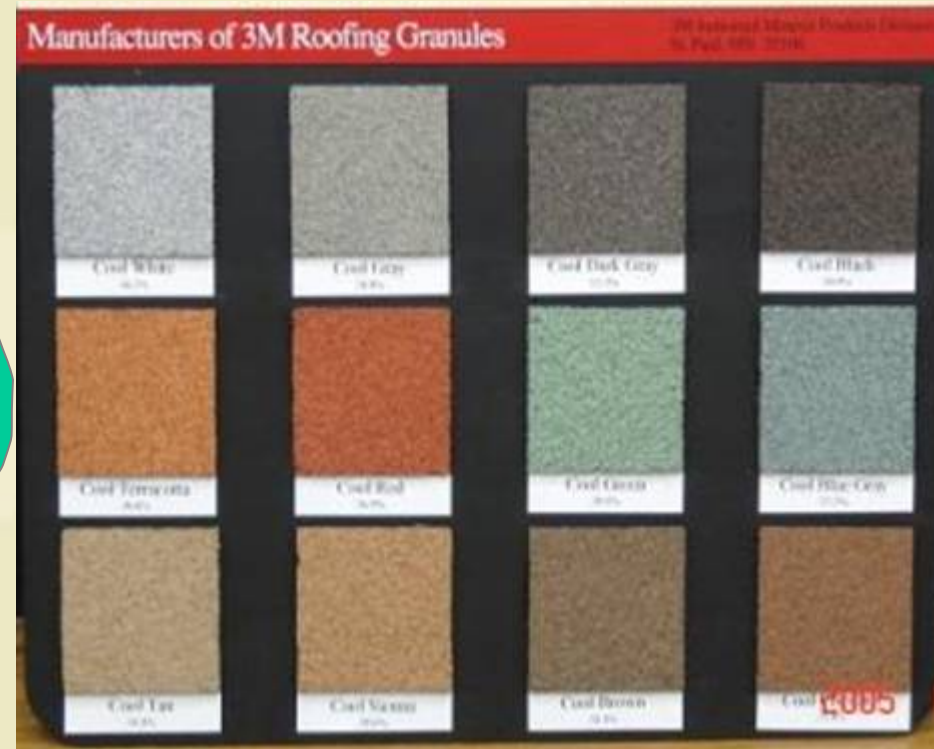
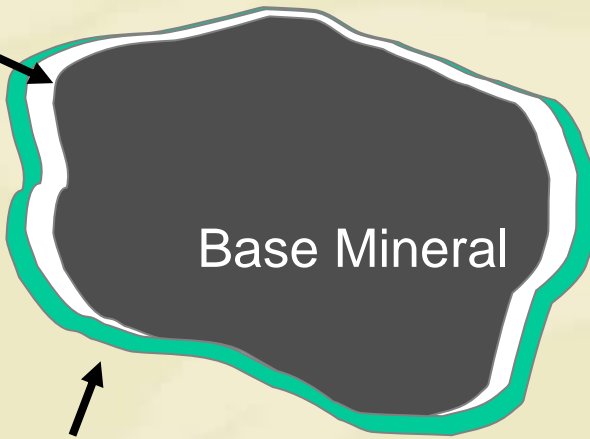
Energy Efficiency from 12 New 3M Cool Granule Colors
(Depending on blend rate shingles can meet initial Energy Star® criteria)

Technical Solution *Multi-coat process*

Reflective
Primary
Coating

Base Mineral

Outer IRR Color Coating



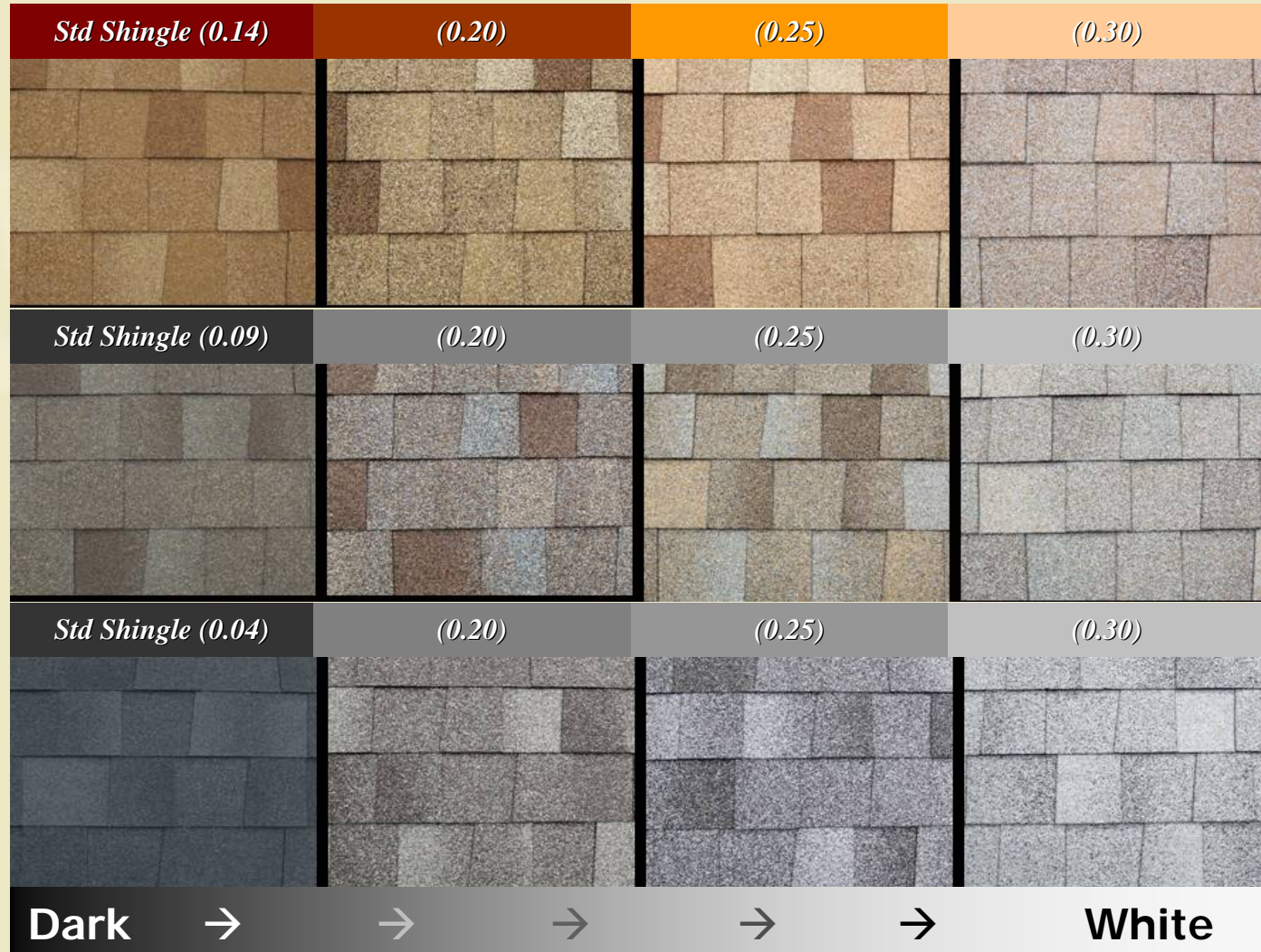
Elk Cool Shingle Program and Technical Status

- Promoted via media, distribution, and the contractor base.
 - Reception has been uneven:
 - Lighter color palette.
 - Higher cost (absent any rebates to offset).
- Total sales < 1% of Elk total CA volume.
- Samples undergoing aging at the Atlas Test Farm through the CRRC program.

Concerns

#1 - Current technology for Cool non-white shingles limited to achieving .25 reflectance without near-complete “wash out.”

Color Intensity vs. Solar Reflectance



Concerns (cont.)

#2 - Cost premium of the current line is \$.25/ft².

Absent utility or other rebate offsets, consumers are choosing traditional colors. Combination of higher pigment costs, multiple coating requirements, and shingle productivity impacts.

Concerns (cont.)

#3 - While standards are being built (or proposed) around 3 year aged data, none exist.

Elk Cool Shingle Reflectance

<u>Color</u>	<u>Initial*</u>	<u>10 Month Aged*</u>
Cool Antique Slate	.27	.27
Cool Weatheredwood	.26	.25
Cool Barkwood	.26	.26
Cool Brown Castle	.26	.26
Aspen (White)	.25	.21

*Testing per ASTM 1549 MC.

Elk's Position

1. Elk would support an initial reflectance of .25 and emittance of .75, consistent with Energy Star. Higher levels unnecessarily dilute color options and raise costs with essentially no conservation gains.
2. Elk would support 3 year aged reflectance of .20, 33% higher than Energy Star. No data support for higher aged levels exists yet.

Elk's Position

3. Elk supports limiting implementation to areas outside of Climate Zones 1-8.
4. Elk urges the implementation of utility or other rebate programs ASAP to stimulate sales volume and continued product development.